

**Church, Steve@ARB**

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**From:** Green, Lance E - DNR [Lance.Green@Wisconsin.gov]  
**Sent:** Monday, October 05, 2009 11:04 AM  
**To:** Church, Steve@ARB  
**Cc:** Green, Lance E - DNR  
**Subject:** ETAC Report - possible correction

Hello,

I just wanted to call your attention to a section that may contain a small error in the **ETAAC Advanced Technology Development Draft Report For Public Review**

In this section:

### **Industrial and Commercial Refrigeration**

Replacing today's refrigerants with new fluids specifically fabricated for low global warming potential (GWP) appears a straightforward approach to reducing GHG.

...

The potential GHG reductions promise to be significant. For example, replacing 1 pound of conventional refrigerant (such as R-744) with one pound of low GWP refrigerant can reduce GHG by 3,784 tons.

In that last sentence the point is somewhat reversed. First, CO2 (R-744) has a GWP of 1, and is not yet a "conventional" refrigerant (see your notes in the table just under this wording).

Second, the common refrigerants now used are HCFCs or HFCs (hydrofluorocarbons or blends of these, usually introduced as substitutes for the ozone-depleting refrigerants) which have GWPs that can be thousands of times greater than CO2. See these references:

<http://www.arb.ca.gov/cc/non-co2-clearinghouse/non-co2-clearinghouse.htm#High-GWP>

<http://www.pca.state.mn.us/climatechange/hgwp.html>

[http://www.washingtonpost.com/wp-dyn/content/article/2009/07/19/AR2009071901817\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2009/07/19/AR2009071901817_pf.html)

You may want to revise the section to reflect that replacing the current, commonly used refrigerants with high GWPs with low or zero-GWP substances. Also see <http://dnr.wi.gov/air/pubinfo/airmatters/200908.html>

Otherwise, great work!!!

**Lance Green**

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<http://dnr.wi.gov/air/compenf/refrig/>

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